

REMARKS

Claims 1-36 are pending in the application. Claims 1, 7, 8, 13, 19, 20, 25, 31, and 32 have been amended. Reconsideration is respectfully requested. Applicants submit that the pending claims 1-36 are patentable over the art of record and allowance is respectfully requested of claims 1-36.

Applicants would like to thank Examiner Bachner for withdrawing the finality of the Office Action mailed on July 17, 2002.

A. Allowable Claims

Applicants would like to thank Examiner Bachner for indicating that claims 7, 19, and 31 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims. There were no rejections under 35 U.S.C. 112, second paragraph set forth in the Office Action. Applicants have amended claims 7, 19, and 31 include all of the limitations of the base claim and any intervening claims. Therefore, Applicants believe that claims 7, 19, and 31 are in condition for allowance.

B. Rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a)

In paragraph 3, the Office Action rejects claims 1-6, 12-18, 24-30, and 36 under 35 U.S.C. §102(e) as being anticipated by Torii (U.S. Patent No. 6,389,446). Applicants traverse these rejections for the following reasons.

Claim 1 relates to generating a signal when status for the job is changed from a first status to a second status, wherein each status for the job is associated with a single work process for processing the job among multiple work processes and wherein each status describes processing to be performed on the job; identifying a work process for processing the job based on the second status; notifying the work process associated with the second status that one job had its status changed to the second status in response to the signal; processing, with the work process, the job

that had its status changed from the first status to the second status; and, modifying, with the work process, the status of the job after completing the processing of the job.

The Torii patent teaches that "A program is divided into several instruction streams, and each of them is executed as a thread. A thread processor executes the thread. . . The thread status table manages execution status of each thread processor and parent-child relation." (Abstract)

In the Torii patent, Figure 4 illustrates a thread status table. The thread status table "has entries for the number of thread processors 6" and each "entry for thread processors #0 through #3 (6a through 6d) includes thread status entry 10." (Col. 6, lines 16-19) At Col. 6, lines 20-22, the Torii patent teaches that: "Thread status entry 10 indicates the operation status (e.g., 'busy'/'free' state) of corresponding thread processor." Additionally, the status of each processor may be free or busy according to the Torii patent. Any thread processor that is free is used to execute a child thread (Figure 5 of the Torii patent).

The thread status table has entries for the status of thread processors rather than for jobs. The Examiner states that "a job is a thread." Applicants respectfully disagree. For example, as claimed, a job has a status associated with it that describes processing to be performed on the job. A thread in the Torii patent does not have such a status associated with it. Additionally, a job is processed by a work process, which spawns a thread. (See, for example, the Specification at page 5, lines 11-14). Thus, a job is not a thread.

In Applicants' claimed invention, each status for the job is associated with a single work process for processing the job among multiple work processes (See, for example, the Specification at 5, lines 25-26 and page 6, lines 26-28). Unlike the Torii patent, which allows multiple processors to be associated with a busy state and allows multiple processors to be associated with a free state, in Applicants' claimed invention, each status is associated with a single work process. Additionally, in Applicants' claimed invention, each status describes processing to be performed on the job. That is, rather than indicating whether a work process is free or busy, Applicants' claimed status describes processing to be performed on the job (e.g., printing or formatting as is described, for example, in the Specification at page 4, lines 25-27).

Claim 1 relates to identifying a work process for processing the job based on the second status. On the other hand, the Torii patent selects any thread processor that is free to execute a child thread (Figure 5 of the Torii patent).

The Office Action cites the Torii patent, Figures 4-5, Col. 6, lines 14-50 as disclosing "notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal." Again, at Col. 6, lines 20-22, the Torii patent teaches that: "Thread status entry 10 indicates the operation status (e.g., 'busy'/'free' state) of corresponding thread processor." Also, at Col. 6, lines 37-42, the Torii patent teaches: "it is determined whether a thread processor in a free state exists . . . by checking the content of thread status entry 10 in thread status table 9." This does not anticipate Applicants' claimed element of: "notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal." In particular, the Torii patent discloses that the thread status table is used to determine whether a thread processor is in a busy or free state. The Torii patent does not teach or suggest notifying a work process associated with the second status that one job had its status changed to the second status. That is, the status of the Torii patent is merely free or busy, while Applicants' claimed status is associated with a single work process for processing the job among multiple work processes and wherein each status describes processing to be performed on the job. The Torii patent does not associate any work process with a job status.

The Office Action cites the Torii patent, Figures 4-5, Col. 6, lines 14-50, as disclosing "processing, with the work process, the job that had its status changed from the first status to the second status." The Torii patent does not teach or suggest that a job whose status has changed is processed with a work process. Instead, the Torii patent merely discloses that a thread processor may spawn a thread.

The Office Action cites the Torii patent, Figures 4-5, Col. 6, lines 14-50, as disclosing "modifying, with the work process, the status of the job after completing the processing of the job." Since the thread status table of the Torii patent provides the status of a thread processor, rather than the status of a job that is processed by one or more work processes, the Torii patent

can not teach or suggest modifying the status of the job that is associated with a single work process for processing the job among multiple work processes and wherein each status describes processing to be performed on the job. The Torii patent merely indicates whether a status of a thread processor is free or busy.

Therefore, claim 1 is not anticipated by the Torii patent.

Independent claims 13 and 25 are not anticipated by the Torii patent for at least the same reasons as were discussed with respect to claim 1.

Dependent claims 2-6, 12, 14-18, 24, 26-30, and 36 incorporate the language of independent claims 1, 13, and 25, respectively, and add additional novel elements. Therefore, dependent claims 2-6, 12, 14-18, 24, 26-30, and 36 are not anticipated by the Torii patent for at least the reasons discussed with respect to independent claims 1, 13, and 25.

In paragraph 5, the Office Action rejects claims 10-11, 22-23, and 34-35 under 35 U.S.C. §103(a) as being unpatentable over Torii in view of Flores et al.(U.S. Patent No. 6,058,413). Applicants traverse these rejections for the following reasons.

The combination of the Torii and Flores patents do not teach or suggest the subject matter of claims 10-11, 22-23, and 34-35. In particular, the Flores patent does not correct the defects of the Torii patent.

For example, the Flores patent does not describe generating a signal when status for the job is changed from a first status to a second status, wherein each status for the job is associated with a single work process for processing the job among multiple work processes and wherein each status describes processing to be performed on the job and identifying a work process for processing the job based on the second status.

Dependent claims 10-11, 22-23, and 34-35 incorporate the language of independent claims 1, 13, and 25, respectively, and add additional novel elements. Since the Torii patent fails to disclose all the elements of claims 10-11, 22-23, and 34-35, dependent claims 10-11, 22-23, and 34-35 are not taught or suggested by the Torii patent for at least the same reasons as were discussed with respect to independent claims 1, 13, and 25. Since the Flores patent does not

overcome the defects of the Torii patent, claims 10-11, 22-23, and 34-35 are not taught or suggested by the Torii patent or the Flores patent, either alone or in combination.

In particular, the Office Action rejected claims 10, 22, and 34, citing the Torii patent and the Flores patent, Col. 7, lines 27-31, Col. 8, lines 14-30, and Figure 4. Claims 10, 22, and 34 disclose that the job comprises a data file, wherein at least one work process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the work process to an output device. Col. 7, lines 29-31 of the Flores patent recite: "These STF processors map and translate between a workflow-enabled application's data format and the data elements of the workflow system API's." Col. 8, lines 14-30 discloses Figure 4 and "shows the major components of an STF processor." The Flores patent does not teach or suggest that a job comprises a data file. Instead, the Flores patent discloses mapping and translating between a data format and data elements. Also, the Flores patent does not teach or suggest that a work process is associated with a status that describes processing to be performed on the job. Therefore, the Flores patent can not teach or suggest that one work process associated with one status processes the data file to alter its format and at least one other work process associated with another status processes the data file in the altered format to transmit the work process to an output device.

Claims 11, 23, and 35 depend from claims 10, 22, and 34 and for at least the same reasons as discussed with respect to claims 10, 22, and 34, claims 11, 23, and 35 are not taught or suggested by the Torii patent or the Flores patent, either alone or together.

In paragraph 6, the Office Action rejects claims 8-9, 20-21, and 32-33 under 35 U.S.C. §103(a) as being unpatentable over Torii. Applicants traverse these rejections for the following reasons.

Dependent claims 8-9, 20-21, and 32-33 incorporate the language of independent claims 1, 13, and 25, respectively, and add additional novel elements. Since the Torii patent fails to disclose all of the elements of independent claims 1, 13, and 25, dependent claims 10-11, 22-23, and 34-35 are not taught or suggested by the Torii patent for at least the same reasons as were discussed with respect to independent claims 1, 13, and 25.

In particular, claims 8, 20, and 32 disclose the work process querying the database table for jobs having the status associated with the work process; processing the jobs having the status associated with the work process; terminating processing of the database table if there are no further jobs in the database table having the status associated with the work process; and querying the database table for additional jobs after receiving the notification.

Since the Torii patent describes a thread status table rather than a job status table, the Torii patent can not teach or suggest querying the database table for jobs having the status associated with the work process. Also, since the Torii patent does not teach or suggest that a status for the job is associated with a single work process for processing the job among multiple work processes and wherein each status describes processing to be performed on the job, the Torii patent does not teach or suggest the subject matter of claims 8, 20, and 32.

Claims 9, 21, and 33 depend from claims 8, 20, and 32 and for at least the same reasons as discussed with respect to claims 8, 20, and 22, claims 9, 21, and 33 are not taught or suggested by the Torii patent.

CONCLUSION

For all the above reasons, Applicant submits that the pending claims 1-36 are patentable over the art of record, and allowance is requested of claims 1-36.

Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 50-0563.

The under signed attorney invites the Examiner to contact her at (310) 553-7973 if the Examiner believes such contact would advance the prosecution of the case.

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